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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,359	12/19/2001	Fay Chong JR.	5681-05200	9639

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EXAMINER

TSAI, SHENG JEN

ART UNIT PAPER NUMBER

2186

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/027,359

Applicant(s)

CHONG, FAY

Examiner

Sheng-Jen Tsai

Art Unit

2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 1, 10, 16 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-9, 11-15, 17-26 and 28-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is taken in response to Applicants' Request for Continued Examination (RCE) filed on 9/18/2006 regarding application 10/027,359 filed on 12/19/2001.

2. Claims 1, 10, 16, and 27 have been cancelled previously.

Claims 28 and 32-34 have been amended.

Claims 2-9, 11-15, 17-26 and 28-34 are pending for consideration.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 2-9, 11-15, 17-26 and 28-34 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being anticipated by claims 1-36 of copending Application No. **10/027,353**, as shown in the following table. Although not all of the conflicting claims are exactly identical, they are extremely similar and are not patentably distinct from each other as explained in the "explanation" column of the table below:

10/027,359 (amended as of 5/31/2005)	10/027,353 (amended as of 3/11/2005)	EXPLANATION
32	1, 34	Both describe similar apparatus with similar features/functions such as storage array, cache accumulator memory, block operations, functional unit, and the intermediate result being both a result and an operand of the accumulation operation.
33	1, 20	Both describe similar method of using similar features/functions such as storage array, cache accumulator memory, block operations, functional unit, and the intermediate result being both a result and an operand of the accumulation operation.
34	1, 33	Both describe similar means of providing similar features/functions such as storage array, cache accumulator memory, block operations, functional unit, and the intermediate result being both a result and an operand of the accumulation operation.
2	2	Both recite the cache memory being a dual-ported memory.
3	3	Both recite that cache memory comprises at least two independently interfaced memory banks.
4	4	Both recite that the cache is configured to indicate whether a particular block stored in the cache is modified with respect to a copy in main memory.
5	5	Both recite that the cache is to load a copy of operand from memory if it is not present in the cache.
6	6	Both recite that if all the block storage locations in the cache are currently storing valid data, the cache is to select one of the block storage location for overwriting.
7	7	Both recite the use of the least recently used algorithm to overwrite.
8	8	Both recite writing data back to memory before loading the copy to the selected storage location in cache.
9	13	Both recite the functional unit is to perform parity calculation on the block operands.
11	15	Both recite the first block operand is a first one of the data blocks in the stripe of data.
12	16	Both recite the functional unit is to perform the operation on two block-operands.
13	17	Both recite the same sources of the first and the second operands.
14	18	Both recite the same sources of the first and the second operands.
15	19	Both recite the cache is to store a word of the block result during an access cycle in which the cache is also to provide a word of block operand to the functional unit.
17	19	Both recite the cache is to store a word of the block result during an access cycle in which the cache is also to provide a word of block operand to the functional unit.

18	21	Both recite the cache memory being a dual-ported memory.
19	22	Both recite that cache memory comprises at least two independently interfaced memory banks.
20	23	Both recite that if all the block storage locations in the cache are currently storing valid data, the cache is to select one of the block storage location for overwriting.
21	24	Both recite the use of the least recently used algorithm to overwrite.
22	25	Both recite writing data back to memory if the data is modified with respect to a copy stored in the memory.
23	28	Both recite the functional unit is to perform parity calculation on the block operands and generate block results.
24	29	Both recite the command is issued by a storage system controller.
25	30	Both recite the functional unit is to perform the operation on two block-operands.
26	31	Both recite the second operand is to be provided from a data bus.
28	34	Both describe similar data processing system performing similar operations.
29	35	Both recite the same sources of the first and the second operands.
30	36	Both recite the same sources of the first and the second operands.
31	19	Both recite the cache is to store a word of the block result during an access cycle in which the cache is also to provide a word of block operand to the functional unit.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

5. Claims 2-9, 11-15, 17-26 and 28-34 would be allowable if able to overcome the double-patenting rejections indicated in the previous section.

Conclusion

6. Claims 2-9, 11-15, 17-26 and 28-34 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being anticipated by claims 1-36 of copending Application No. **10/027,353**, but would be allowable if able to overcome the double-patenting rejections indicated in the previous section.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheng-Jen Tsai whose telephone number is 571-272-4244. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on 571-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sheng-Jen Tsai
Examiner
Art Unit 2186

October 3, 2006


PIERRE BATAILLE
PRIMARY EXAMINER
10105106